FIRE

Along the DALTON HIGHWAY

BLM Alaska

Questions and Answers

2007

FIRE IN THE BOREAL FOREST. The Russian name for the forest you see along the Dalton Highway is ***taiga***. The Athabascan people of central Canada call it "the land of little sticks," an apt description of the stunted black spruce that grow in cold, wet sites. Drier, warmer locations support white spruce, birch, aspen, and cottonwood. Together, they make up a band of trees called the boreal forest, which stretches across three continents and encircles the Arctic. This is the largest forest in the world—and it depends on fire to regenerate and maintain its health.

How do wildfires start?

Summer in northern Alaska brings frequent thunderstorms, formed as continuous sunlight heats the ground and releases moisture into the air. Lightning generated within thunderstorms sparks over 200 wildland fires in Alaska every year. Each summer, the Bureau of Land Management - Alaska Fire Service's detection system records an average of 26,000 lightning bolts, most of which strike the boreal forest.

What about protecting the pipeline?

Pipeline engineers anticipated wildfire and wrapped the trans-Alaska oil pipeline in both glass insulation and galvanized steel so it can withstand flame and heat. Firefighters further reduce the risk posed by wildfires by removing fuel sources, such as dry vegetation, near sensitive pipeline equipment.

Why do fires burn in a patchwork pattern?

Wildland fire rarely consumes everything in its path. Weather conditions, topography, plant types, and moisture cause fires to burn in patchwork patterns across landscapes. The result is a mosaic of scorched, lightly singed, and untouched forest with a variety of plant ages and types.

This variety supports greater diversity of wildlife and especially benefits those species that depend on more than one type of habitat. For example, snowshoe hares eat new herbs and shrubs that grow in burned areas, but they need the cover of unburned forests to escape from predators.

What is the record of acres burned in a year?

In 2004 unusually hot, dry, and windy weather sparked Alaska's largest fire season on record. A total of 706 fires—272 lightning-caused and 434 human-caused—burned across 6.6 million acres, or nearly 2% of Alaska's total acreage. In 2005 another 4.6 million acres burned in Alaska, making it the third largest fire year.

Why are some wildfires allowed to burn?

Wildland fire rejuvenates forests by creating ideal growing conditions. Reducing mineral-rich wood to ash recycles and releases nitrogen and minerals such as phosphorus and sulfur into the soil. Fire opens the forest canopy and exposes the forest floor to sunlight, warming the soil and stimulating new growth from seeds and roots.

Resource managers recognize the value of fire and try to suppress only those fires that threaten life and property or treasured natural and cultural resources.

Does fire travel through the forest floor?

The organic layer of the boreal forest soil is a dense mat of vegetation that accumulates over a long period of time and decomposes very slowly due to the Arctic's frigid climate. When environmental conditions are very dry, fire can actually burn through the organic layer of the soil. There is often little or nothing left to anchor the shallow roots of boreal forest trees, so they fall over.

What will burned areas look like next year?

Soon after a fire burns through the forest, new shoots of herbs and fungi emerge from the ashes. By the following summer, waves of bright pink fireweed, flowing green grasses, and many mushrooms, both edible and toxic, brighten the landscape.

A wildfire burns unevenly through the boreal forest and creates large clouds of smoke.

Dalton Highway Fire History

Erickson Creek Fire

1

Year Burned: 2003
Total Acres: 120,606 (48,808 ha)

Starting near milepost 11 you can see where flames zigzagged across the road, burning some areas while skirting others. Firefighters discovered flames closing in on the remote gate valves that regulate oil flow in the pipeline. They purposely ignited nearby vegetation and thus starved the fire of fuel – fighting fire with fire.

1971 Fire

2

Year Burned: 1971

At milepost 27 the road passes through a 35-year-old burn. Young birches have replaced the grasses and wildflowers that came up in the fire's wake. Wildlife is attracted to the fire's edge, where the saplings and unburned forest meet and provide both food and shelter. This fire is now surrounded by the Fish Creek Fire.

Fish Creek Fire

Year Burned: 2005
Total Acres: 117,750 (47,650 ha)

This fire created dense smoke but left many trees standing. In any burned area, standing trees may topple without warning because of fire-damaged root systems.

Waldron Creek Fire

3

Year Burned: 2004
Total Acres: 7,022 (2,842 ha)

This lightning-caused fire near milepost 42 added smoke to the Ft. Hamlin Hills fire at the Yukon River in early July. A Department of Transportation employee reported that visibility on the bridge was reduced to less than 7 feet (2 m) at one point.

At milepost 51 there is evidence of a small fire that burned in 1991.

Ft. Hamlin Hills Fire

4

Year Burned: 2004
Total Acres: 98,279 (39,772 ha)

At milepost 56 you can see where fire swept through the Yukon Crossing area and overran the highway. Firefighters worked hard to protect people and facilities at the Yukon River, Five Mile, and the Seven Mile Department of Transportation Station.

Ray River Fire

5

Year Burned: 2005
Total Acres: 97,307 (39,379 ha)

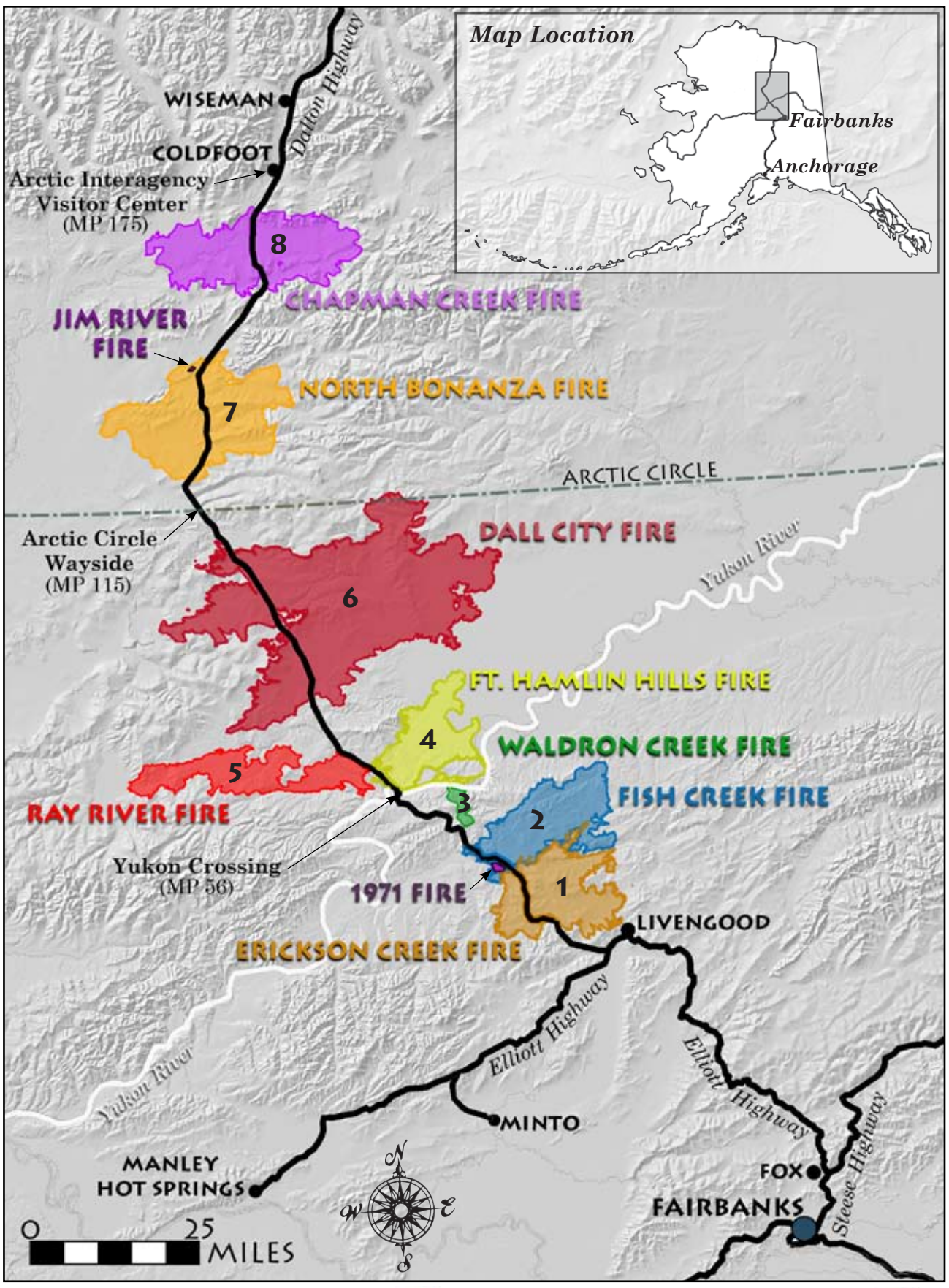
Near milepost 70 you can see the edge of this lightning-caused fire on the west side of the highway.

Fast Facts About Fire!

Between 2003 and 2005, fires along the Dalton Highway burned over 1.2 million acres (485,600 ha) of land.

On Solstice, June 21, 2005, fire incinerated Gobblers Knob, burning 15 to 20 miles (24–32 km) of land in just 6 to 8 hours.

By late August that year, the BLM lightning detection system recorded about 135,000 cloud-to-ground lightning strikes in Alaska, more than three times the average number in recent years.



Dall City Fire

6

Year Burned: 2004
Total Acres: 483,280 (195,576 ha)

This enormous fire roared over the alpine tundra of Finger Mountain at milepost 98 and the wet sedge meadows near the Kanuti River in August—usually a wet month in the North. In 2004 even the normally wet organic layer beneath the tundra dried out, and wind-driven flames raced across the highway along a 35-mile front. At one point, this fire doubled in size from 200,000 to 400,000 acres in just a few days. It was still smoldering as snow fell in mid-September.

Jim River Fire

7

Year Burned: 1988
Total Acres: 215 (87 ha)

Now surrounded by the North Bonanza fire, the remains of this small fire are barely visible at milepost 138. It was ignited by people rather than lightning.

North Bonanza Fire

Year Burned: 2005
Total Acres: 190,945 (77,273 ha)

For an unprecedented second year, hot, dry weather created extreme fire conditions in 2005. Whipped by fierce northeast winds, the North Bonanza fire crossed the highway at Connection Rock, Gobblers Knob, Prospect Creek, and Pump Station 5. Local crews fought to protect Pump Station 5 and the Department of Transportation Station at Jim River.

Chapman Creek Fire

8

Year Burned: 2005
Total Acres: 172,320 (69,735 ha)

Fire nearly reached the tiny settlement of Coldfoot in 2005. Lightning touched off the fire in late May east of the highway near milepost 161, and it moved north with frightening speed. Eventually, 169 firefighters, assisted by two helicopters and a scooper plane, stopped the fire just 6 miles south of Coldfoot.

Alaska Fire Information

BLM – Alaska Fire Service:
http://fire.ak.blm.gov

BLM – Dalton Highway Travel Information
http://www.blm.gov/ak/dalton

Alaska State Forestry:
http://www.dnr.state.ak.us/forestry

National Interagency Fire Center:
http://www.nifc.gov

National Park Service, Fire and Aviation Management:
home.nps.gov/applications/fire

U.S.Fish and Wildlife Service, Fire Management:
http://alaska.fws.gov/fire

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